

# reComputer Industrial Series with NVIDIA® Jetson Orin™ NX/ Orin™ Nano/ Xavier NX Module

Powerful and Compact Intelligent Edge Box with Passive Heatsink Design

## Hardware Feature

The reComputer Industrial series combines the NVIDIA Ampere™ GPU architecture and 64-bit operating capability to provide 20-100 TOPs modern AI performance at the edge based on different module choice, delivering up to 5x the performance of Jetson Xavier NX and up to 3X the performance of Jetson AGX Xavier. It is specifically designed with industry interfaces such as RJ-45 GbE, RS-232/RS-422/RS-485, DI/DO, CAN, USB3.2, and TPM2.0 (Module optional). The system is suitable for edge AI solutions in various industries, including smart cities, security, industrial automation, smart factories, and medical imaging.

## Software Compatibility

The reComputer Industrial series come with pre-installed Jetpack 5.1 SDK, which includes CUDA-X accelerated libraries and other NVIDIA technologies. This provides a full development environment, including the Jetson Linux Driver package for the Linux kernel, bootloader, NVIDIA drivers, flashing utilities, sample filesystem, and toolchains. The software also includes security features, over-the-air update capabilities, and essential frameworks such as [NVIDIA DeepStream SDK](#), [NVIDIA TAO Toolkit](#), and [NVIDIA Riva](#) Speech AI applications for AI-based multi-sensor processing, model training acceleration, and speech recognition.

## Support AI Platforms (continuing updating)

Intelligent Video Analytics



Computer Vision



Sound AI



Fleet management



Cloud native deployment



### reComputer Industrial J40 Orin NX

**8GB** 70 TOPS **16GB** 100 TOPS

### reComputer Industrial J30 Orin Nano

**4GB** 20 TOPS **8GB** 40 TOPS

### reComputer Industrial J20 Xavier NX

**8GB** 21 TOPS **16GB** 21 TOPS

## reComputer Content

- reComputer Industrial x1
- Mounting bracket x2
- DIN rail bracket x1
- Bracket screw x4
- 16-Pin Terminal Block for DIO x1
- 19V Power adapter (power cord sold separately) x1
- 2-Pin Terminal block power connector x1

## Interfaces

- 2x RJ-45 GbE (1 for POE-PSE 802.3 af)
- 1x RS-232/RS-422/RS-485
- 1x CAN
- 1x HDMI 2.0 Type A
- 3x USB3.2
- 2x CSI (2-lane 15pin)
- 1x TPM2.0 (Module optional)

# reComputer Industrial Full System Series Specification Comparison

| Product Name                |                               | reComputer Industrial J4012   | reComputer Industrial J4011                                 | reComputer Industrial J3011  | reComputer Industrial J3010                                  | reComputer Industrial J2012  | reComputer Industrial J2011  |
|-----------------------------|-------------------------------|---|---|--|--|--|------------------------------|
| <b>NVIDIA Jetson Module</b> |                               | Orin NX 16GB  | Orin NX 8GB   | Orin Nano 8GB  | Orin Nano 4GB  | Xavier NX 16GB   | Xavier NX 8GB                |
| <b>SKU</b>                  |                               | 110110191   | 110110190   | 110110193  | 110110192  | 110110189  | 110110188                    |
| <b>Processor System</b>     | <b>AI Performance</b>         | 100 TOPS  | 70 TOPS   | 40 TOPS  | 20 TOPS  | 21 TOPS  |                              |
|                             | <b>GPU</b>                    | 1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores                             |   | 1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores            | 512-core NVIDIA Ampere architecture GPU with 16 Tensor Cores | 384-core NVIDIA Volta™ GPU with 48 Tensor Cores  |                              |
|                             | <b>CPU</b>                    | 8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3                                 | 6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3 | 6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3              |  | 6-core NVIDIA Carmel ARM®v8.2 64-bit CPU, 6MB L2 + 4MB L3  |                              |
|                             | <b>Memory</b>                 | 16GB 128-bit LPDDR5 102.4GB/s   | 8GB 128-bit LPDDR5 102.4GB/s                                | 8GB 128-bit LPDDR5 68 GB/s   | 4GB 64-bit LPDDR5 34 GB/s                                    | 16GB 128-bit LPDDR4x 59.7GB/s  | 8GB 128-bit LPDDR4x 59.7GB/s |
|                             | <b>Video Encode</b>           | 1*4K60 (H.265)   3*4K30 (H.265)   6*1080p60 (H.265)   12*1080p30 (H.265)                  |   | 1080p30 supported by 1-2 CPU cores                                       |  | 2*4K60   4*4K30   10*1080p60   22*1080p30 (H.265)<br>2*4K60   4*4K30   10*1080p60   20*1080p30 (H.264)           |                              |
|                             | <b>Video Decode</b>           | 1*8K30 (H.265)   2*4K60 (H.265)   4*4K30 (H.265)   9*1080p60 (H.265)   18*1080p30 (H.265) |   | 1*4K60 (H.265)   2*4K30 (H.265)   5*1080p60 (H.265)   11*1080p30 (H.265) |  | 2*8K30   6*4K60   12*4K30   22*1080p60   44*1080p30 (H.265)<br>2*4K60   6*4K30   10*1080p60   22*1080p30 (H.264) |                              |
| <b>Storage</b>              | <b>eMMC</b>                   | -   | -   | -  | -  | 16GB eMMC 5.1  |                              |
|                             | <b>Expansion</b>              | M.2 Key M PCIe Gen4.0 SSD (M.2 NVMe 2280 SSD 128G included)                               |   |  |  |  |                              |
| <b>I/O</b>                  | <b>Networking</b>             | 1* LAN1 RJ45 GbE PoE(PSE 802.3 af 15 W), 1* LAN2 RJ45 GbE (10/100/1000Mbps)               |   |  |  |  |                              |
|                             | <b>USB</b>                    | 3* USB3.2 Gen1, 1* USB2.0 Type C(Device mode), 1* USB2.0 Type C For Debug UART & RP2040   |   |  |  |  |                              |
|                             | <b>DI/DO</b>                  | 4*DI,4*DO,3*GND_DI,2*GND_DO,1*GND_ISO,1*CAN   |   |  |  |  |                              |
|                             | <b>COM</b>                    | 1* DB9 (RS232/RS422/RS485)  |   |  |  |  |                              |
|                             | <b>Display</b>                | 1*HDMI 2.0 Type A   |   |  |  |  |                              |
|                             | <b>SIM</b>                    | 1* Nano SIM card slot   |   |  |  |  |                              |
| <b>Expansion</b>            | <b>Mini PCIe</b>              | Mini PCIe for 4G/L0RaWAN® (Module optional)   |   |  |  |  |                              |
|                             | <b>Wi-Fi</b>                  | Support SMD Wi-Fi/Bluetooth (Module optional)   |   |  |  |  |                              |
|                             | <b>M.2 Key B</b>              | M.2 Key B support 4C/5G (Module optional)   |   |  |  |  |                              |
|                             | <b>Fan</b>                    | Fanless, passive heatsink, 1*Fan connectors(5V PWM)                                       |   |  |  |  |                              |
|                             | <b>TPM</b>                    | 1* TPM 2.0 connector (Module optional)  |   |  |  |  |                              |
|                             | <b>RTC</b>                    | 1* RTC socket (CR1220 included), 1* RTC 2-pin   |   |  |  |  |                              |
|                             | <b>Camera</b>                 | 2* CSI (2-lane 15pin)   |   |  |  |  |                              |
| <b>Power</b>                | <b>Power Supply</b>           | DC 12V-24V Terminal block 2 pin   |   |  |  |  |                              |
|                             | <b>Power Adapter</b>          | 19V Power Adapter(without power cord)   |   |  |  |  |                              |
| <b>Mechanical</b>           | <b>Dimensions (W x D x H)</b> | 159mm*155mm*57mm  |   |  |  |  |                              |
|                             | <b>Weight</b>                 | 1.57kg  |   |  |  |  |                              |
|                             | <b>Installation</b>           | Desk, DIN rail, wall-mounting, VESA   |   |  |  |  |                              |
| <b>Environment</b>          | <b>Operating Temperature</b>  | -20 ~ 60°C with 0.7m/s  |   |  |  |  |                              |
|                             | <b>Environment</b>            | 95% @ 40 °C (non-condensing)  |   |  |  |  |                              |
|                             | <b>Vibration</b>              | 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis  |   |  |  |  |                              |
|                             | <b>Shock</b>                  | 50G peak acceleration (11 msec)   |   |  |  |  |                              |
| <b>OS</b>                   |                               | Pre-installed latest Jetpack(provide Linux OS with board support package)                 |   |  |  |  |                              |
| <b>Certification</b>        |                               | FCC, CE, RoHS, UKCA   |   |  |  |  |                              |
| <b>Warranty</b>             |                               | 2 Years   |   |  |  |  |                              |